

# **MODULE 13**

## **Emergency Medical Awareness**

### **Student Manual**

# EMERGENCY MEDICAL AWARENESS

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## EMERGENCY MEDICAL SERVICES AWARENESS

**Terminal Learning Objectives** By the end of this lesson the firefighter recruit will:

1. The student will understand the signs of Sudden Infant Death Syndrome (SIDS).
2. The student will understand the how and why SIDS occurs.
3. The student will understand the basic causes of SIDS.
4. The student will understand basic emergency medical terms generally used on emergency responses.
5. The student will understand the basic protective equipment required to be used on emergency responses.
  - a. Gloves
  - b. Goggles
  - c. Mask
6. The student will have knowledge of five types of blood borne pathogens
7. The student will understand shock signs and basic treatment.
8. The student will understand the different type of wounds and basic wound care.

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## MODULE 13 EMERGENCY MEDICAL AWARENESS

The care and treatment of the sick and injured has become a huge part of what the firefighter is asked to do. Specific training is conducted over and above firefighter to provide the firefighter with the skills necessary. This module will discuss some basic precautions that a firefighter can take to help a person in need.

This module does not provide a firefighter with any medical certification. This module is an awareness level training program.

One of the most important actions a firefighter can take when encountering sick and injured people is to protect the firefighter first.

### **Universal precautions**

Because of a greater awareness of the way communicable diseases are spread emergency response personnel whom come into contact with a patient should take every precaution to protect themselves. Concept is known as body substance isolation – prevent the contact of body fluids and blood. Regulations require that all emergency response personnel use protective equipment to prevent possible exposure to blood and bodily fluids of victims.

### **Protective equipment**

Gloves – use on every patient contact. Eye protection – use when there is spitting or spewing bodily fluids. Breathing protection – use when there is spitting or spewing bodily fluids

### **Wash your hands and other skin surfaces after every response and patient contact**□

### **Types of communicable diseases**

- AIDS – acquired immunodeficiency syndrome epidemic
- Tuberculosis
- HIV – human immunodeficiency virus / transmitted by direct contact with infected blood, semen or vaginal secretions.
- Hepatitis B virus – transmitted by direct contact with infected blood.
- Hepatitis C virus –
- Other blood borne pathogens

### **Shock**

Shock is defined as failure of the circulatory system to move blood through the body.

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## **Types of shock**

- Cardiogenic – the heart cannot pump enough blood to supply the needs of the body.
- Anaphylactic – is caused by an extreme allergic reaction to a foreign substance, such as venom from a bee/wasp or other insect stings, penicillin or certain foods.
- Fluid loss – excessive bleeding and is most common cause of shock.

## **Signs and Symptoms**

- Confusion, restlessness or anxiety
- Cold, clammy, sweaty, pale skin
- Rapid breathing
- Rapid, weak pulse
- Increased capillary refill time
- Nausea and vomiting
- Weakness or fainting
- Thirst

## **General treatment for shock**

- Maintain the victim's airway, breathing and circulatory system (ABC)
- Treat the cause of shock if possible
- Maintain the victim's body temperature by placing blankets under and over the victim
- Make sure the victim does not eat or drink anything
- Assist with other treatments such as oxygen if available
- Arrange for immediate transportation to a medical facility.

## **Bleeding – controlling external blood loss**

3 types of external blood loss

- Capillary
- Venous
- Arterial

Most common type of bleeding – venous

Most serious type of bleeding – arterial

## **Controlling Bleeding**

### **Direct pressure**

Most external bleeding can be controlled by applying direct pressure to the wound

Place a dry, sterile dressing directly on the wound and press on it with your gloved hand

### **Elevation**

If direct pressure does not stop external bleeding, elevate the injured arm or leg as you maintain direct pressure

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## Wounds

Abrasion – commonly called scrapes, road rashes or rug burns.

Puncture – caused by a sharp object that penetrates the skin.

Laceration – common type of open wound.

Avulsion – tearing away of body tissue.

## Principles of wound treatment

### Major principles of wound treatment are:

- Control bleeding
- Prevent further contamination of the wound
- Immobilize the injured part
- Stabilize any impaled object

## Sudden Infant Death Syndrome□

Facts About Sudden Infant Death Syndrome (SIDS).

Many more children die of SIDS in a year than all who die of cancer, heart disease, pneumonia, child abuse, AIDS, cystic fibrosis and muscular dystrophy combined.

### What is SIDS?

Sudden Infant Death Syndrome (SIDS) is a medical term that describes the sudden death of an infant which remains unexplained after all known and possible causes have been carefully ruled out through autopsy, death scene investigation, and review of the medical history. SIDS is responsible for more deaths than any other cause in childhood for babies one month to one year of age, claiming 150,000 victims in the United States in this generation alone - 7,000 babies each year -nearly one baby every hour of every day. It strikes families of all races, ethnic and socioeconomic origins without warning; neither parent nor physician can predict that something is going wrong. In fact, most SIDS victims appear healthy prior to death.

**What Causes SIDS?** While there are no adequate medical explanations for SIDS deaths, current theories include:

- Stress in a normal baby, caused by infection or other factors.
- A birth defect.
- Failure to develop.
- A critical period when all babies are especially vulnerable, such as a time of rapid growth.

### How and why SIDS occurs?

There are many questions but very few answers.

- Scientists are exploring the development and function of the nervous system, the brain, the heart, breathing and sleep patterns, body chemical balances, autopsy findings, and environmental factors.
- SIDS, like many other medical disorders, will eventually have more than one explanation.

### **Can SIDS Be Prevented? No ☐**

#### **Some Basic Facts about SIDS:**

SIDS is a definite medical entity and is the major cause of death in infants after the first month of life. SIDS claims the lives of over 7,000 American babies each year ...nearly one baby every hour of every day. SIDS victims appear to be healthy prior to death. Currently, SIDS cannot be predicted or prevented, even by a physician. There appears to be no suffering; death occurs very rapidly, usually during sleep.

#### **What SIDS is not?**

- SIDS is not caused by external suffocation.
- SIDS is not caused by vomiting and choking.
- SIDS is not contagious.
- SIDS does not cause pain or suffering in the infant.
- SIDS cannot be predicted.
- SIDS is not new.

#### **What should a firefighter do if they respond to an event where an infant has died?**

- Notify police.
- Notify coroner.
- Control access to the room where the death occurred.
- Be sensitive to the needs of the parents but realize that the parents should not hold the deceased infant.
  - Law enforcement should authorize the parents to have access to the infant.